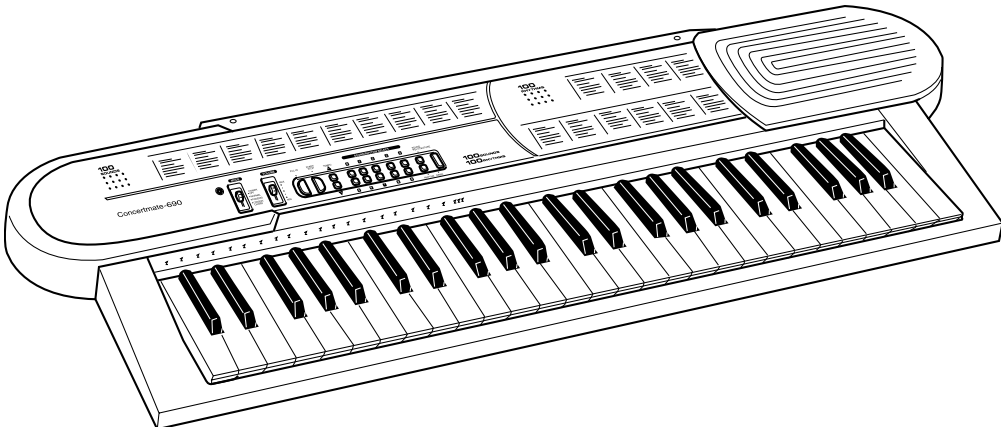
# Concertmate® 690

## OWNER'S MANUAL Portable Electronic Keyboard

Please read before using this equipment.




Cat. No. 42-4035

OPTIMUS®

# FEATURES

Your Optimus Concertmate 690 Portable Electronic Keyboard is a state-of-the-art musical instrument with many special features. It can sound like 100 different musical instruments or sound effects, and its preset rhythms and accompaniments make it easy to use and fun! This versatile electronic keyboard is ideal for anyone who wants to make music, from the beginner to the experienced musician.

Your Concertmate 690's features include:

**Standard Size Keys** — let you easily transfer what you learn using the Concertmate 690 to other keyboard instruments.

**Built-In Demonstration Tune** — lets you hear a sample of what you and the Concertmate 690 can do.

**Polyphonic Sound** — lets you play and hear up to eight notes at the same time so you can create or play almost any type of music.

**Poly/Texture Key** — lets you adjust the Concertmate 690's polyphony (harmony) and sound texture.

**100 Different Sounds** — let you set your Concertmate 690 to sound like anything from a banjo to an insect when you press a key.

**100 Preset Auto-Rhythms** — give you a steady beat for almost any style of music from rock to waltz.

**Auto Accompaniment** — lets you automatically play a harmonic pattern to match any auto-rhythm.

**Tempo Controls** — let you speed up or slow down the tempo of any auto-rhythm or auto accompaniment.

**Fill-In Rhythm** — lets you insert a short variation into any auto-rhythm.

**Three Power Options** — let you power the Concertmate 690 from internal batteries (not supplied), a standard AC outlet (using an optional adapter), or your vehicle's cigarette lighter socket (using an optional adapter).

To fully enjoy the features and functions of this electronic keyboard, please read this manual carefully and completely.

**Note:** This manual explains how to use this electronic keyboard. It does not teach music.

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**RadioShack, Concertmate, and Optimus are registered trademarks used by Tandy Corporation.**

We recommend you record your Concertmate 690's serial number here. The number is located on the bottom of the Concertmate 690.

Serial Number _____

## THE FCC WANTS YOU TO KNOW

This electronic keyboard complies with the limits for a Class B digital device as specified in Part 15 of *FCC Rules*. These limits provide reasonable protection against radio and TV interference in a residential area. However, your Concertmate 690 might cause TV or radio interference even when it is operating properly. To eliminate interference, you can try one or more of the following corrective measures:

- Increase the distance between the Concertmate 690 and the radio or TV.
- Use outlets on different electrical circuits for the Concertmate 690 and the radio or TV.

Consult your local RadioShack store if the problem still exists.

# CONTENTS

**Preparation ..... 5**
Connecting Power ..... 5
Using Batteries ..... 5
Using AC Power ..... 6
Using Vehicle Battery Power ..... 6
Using the Sheet Music Stand ..... 7

**Control Locations ..... 8**

**Operation ..... 9**
Basic Operation ..... 9
Playing the Demonstration Tune ..... 9
Using the Preset Sounds ..... 10
Selecting/Playing a Preset Sound ..... 10
Playing KEYBOARD SPLIT Sounds ..... 11
Playing Drum/Bass Split Sounds ..... 11
Using the Preset Auto-Rhythms ..... 11
Selecting/Playing an Auto-Rhythm ..... 12
Using FILL-IN ..... 12
Using Auto Accompaniment ..... 13
Easy Random Fingering ..... 13
Standard Fingering ..... 15
Adjusting the Polyphony/Texture ..... 16

**Troubleshooting ..... 18**

**Care and Maintenance ..... 19**

**Specifications ..... 20**

## CONNECTING POWER

For portable use, you can power your Concertmate 690 using internal batteries. Using optional adapters, you can also power it from a standard AC outlet or your vehicle's cigarette lighter socket.

**Notes:**

- Connecting an AC or DC adapter automatically disconnects internal batteries.
- Always disconnect an AC or DC adapter when you finish using the Concertmate 690.

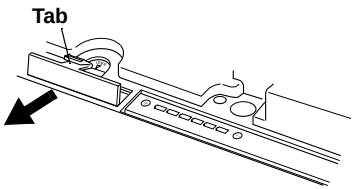
### Using Batteries

Your Concertmate 690 can use six AA batteries for power. For the best performance, we recommend alkaline batteries, such as RadioShack Cat. No. 23-552.

**Cautions:**

- Use only fresh batteries of the required size and recommended type.
- Do not mix old and new batteries, different types of batteries (standard, alkaline, or rechargeable), or rechargeable batteries of different capacities.

1. Set **MODE** to **POWER OFF**.
2. Press the tab on the battery compartment cover in the direction of the arrow, then pull up to remove the cover.




3. Put the batteries into the compartment as indicated by the polarity symbols (+ and –) marked beside the compartment.
4. Replace the cover.

**Notes:**

- If you do not plan to use the Concertmate 690 with batteries for a week or more, remove the batteries.
- If the Concertmate 690 sounds weak or does not work properly, replace all six batteries. Do not mix old and new batteries.

**Caution:** Dispose of old batteries promptly and properly.

**Cautions:**

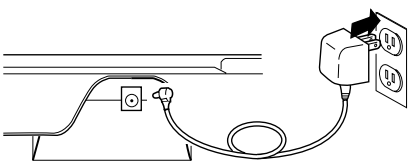
- Always remove old or weak batteries; batteries can leak chemicals that can destroy electronic parts.
- Dispose of old batteries promptly and properly.

## Using AC Power

You can power your Concertmate 690 from a standard AC outlet using a 9-volt AC adapter, such as Cat. No. 273-1656.

**Cautions:**

- You must use an AC adapter that supplies 9 volts of DC power and delivers at least 500 milliamps. Its center tip must be set to negative, and its barrel plug must properly fit the Concertmate 690's **DC 9V** jack. The recommended adapter meets these specifications. Using an adapter that does not meet these specifications could damage the Concertmate 690 or the adapter.
- Always plug the AC adapter into the Concertmate 690 before you plug it into the AC outlet. Always unplug the AC adapter from the AC outlet before you unplug it from the Concertmate 690.



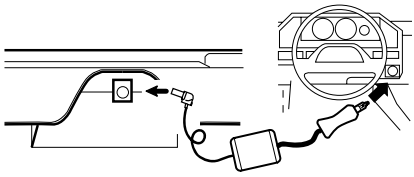
1. Set **MODE** to **POWER OFF**.
2. Insert the AC adapter's barrel plug into the **DC 9V** jack on the rear of the Concertmate 690.
3. Plug the adapter into a standard AC outlet.

## Using Vehicle Battery Power

You can power your Concertmate 690 from your vehicle's cigarette lighter socket using a DC adapter, such as Cat. No. 270-1562.

**Cautions:**

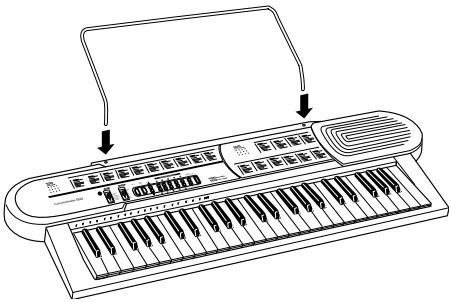
- You must use a DC adapter that supplies 9 volts of DC power and delivers at least 500 milliamps. Its center tip must be sent to negative, and its barrel plug must properly fit the Concertmate 690's **DC 9V** jack. The recommended adapter meets these specifications. Using an adapter that does not meet these specifications could damage the Concertmate 690 or the adapter.
- Always plug the DC adapter into the Concertmate 690 before you plug it into the cigarette lighter socket. Always unplug the DC adapter from the cigarette lighter socket before you unplug it from the Concertmate 690.



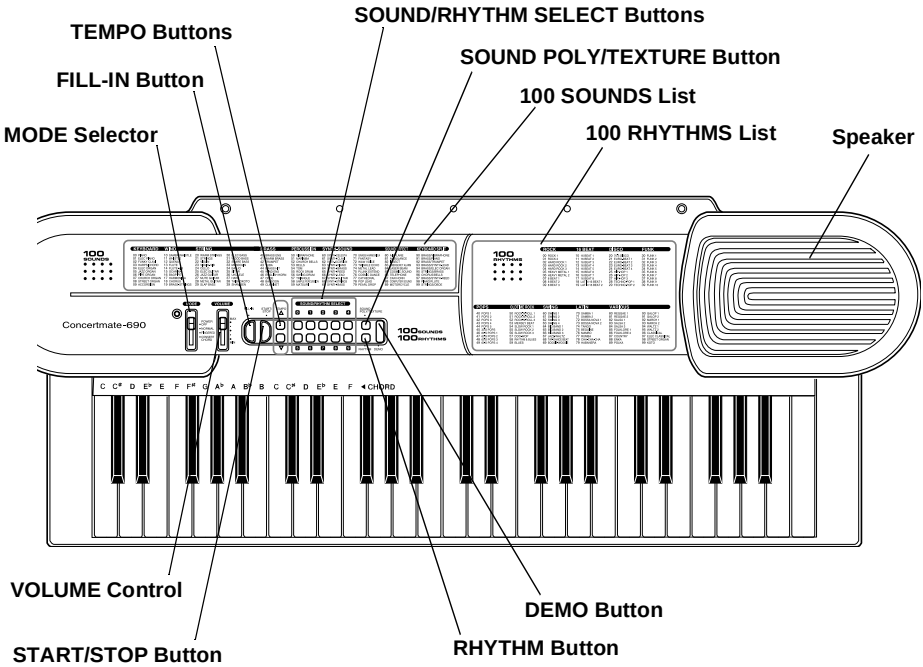
1. Set **MODE** to **POWER OFF**.
2. Connect the adapter's 5.5 mm outer diameter/2.1 mm inner diameter plug to the adapter's cord, matching TIP to negative (–).
3. Set the adapter's voltage switch to 9 volts.
4. Insert the adapter's barrel plug into the Concertmate 690's **DC 9V** jack.
5. Plug the other end of the adapter into the vehicle's cigarette lighter socket.

## USING THE SHEET MUSIC STAND

To easily view sheet music while playing your Concertmate 690, insert the supplied sheet music stand into the holes on the top rear panel.

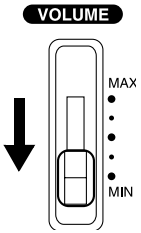


# CONTROL LOCATIONS

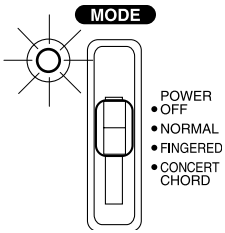


## BASIC OPERATION

1. Set **VOLUME** to **MIN**.



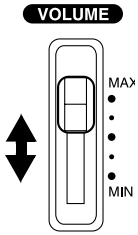

2. Set **MODE** to **NORMAL** to turn on the Concertmate 690. The MODE indicator lights.



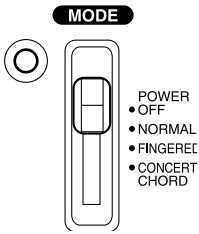

3. To hear a sample of the Concertmate 690's many sounds, play the demonstration tune (see "Playing the Demonstration Tune").

   To make your own music, simply begin playing the keyboard. The Concertmate 690 automatically selects the sound PIANO (No. 00) each time you turn it on. To select a different sound, see "Using the Preset Sounds" on Page 10.

4. Adjust **VOLUME** to the desired setting. Slide it toward **MAX** to increase the volume, or toward **MIN** to decrease the volume.

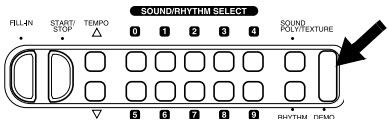



5. To turn off the Concertmate 690, set **MODE** to **POWER OFF**. The MODE indicator turns off.




## PLAYING THE DEMONSTRATION TUNE

Your Concertmate 690 can play a preprogrammed demonstration tune that showcases its many sounds. To play the demonstration tune, press **DEMO** and adjust **VOLUME** to the desired setting. Your Concertmate 690 continuously plays the demonstration tune. Press **DEMO** again to stop the tune.

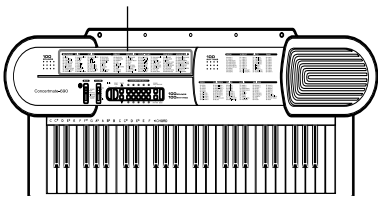


**Note:** You cannot play the keyboard while the demonstration tune is playing.

# USING THE PRESET SOUNDS

Your Concertmate 690 can sound like 100 different musical instruments or sound effects. The name and two-digit number of each preset sound is listed on the Concertmate 690's top panel.

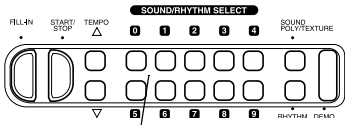
**100 SOUNDS List**



## Selecting/Playing a Preset Sound

1. Set **VOLUME** to **MIN**.
2. Set **MODE** to **NORMAL**.

   **Note:** The Fingered and Concert Chord modes are described in "Using Auto Accompaniment" on Page 13.
3. Press **SOUND POLY/TEXTURE**.
4. Select a sound from the 100 SOUNDS list and enter the two-digit number on the **SOUND/ RHYTHM SELECT** keypad. For example, to select OBOE (No. 47), press 4, then 7.




**SOUND/RHYTHYM SELECT Keypad**

5. Play the keyboard to hear the selected sound.
6. Adjust **VOLUME** to the desired level.
7. To select a different sound, repeat Step 4. Or, if the second digit of the current sound is the same as the first digit of the new sound, simply enter the second digit of the new sound on the **SOUND/ RHYTHM SELECT** keypad.

   For example:

| Current Sound | New Sound | You Press |
|---|---|---|
| 50 | 00 | 0 |
| 00 | 02 | 2 |
| 02 | 25 | 5 |

**Notes:**

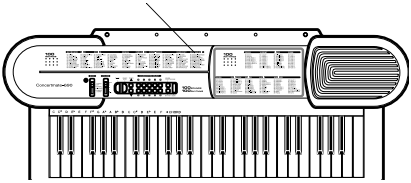
- Some preset sounds, such as INSECT (No. 82) and MOTORCYCLE (No. 89), do not follow the musical scale when played, but produce varying sounds with each key you press.

- These preset sounds change slightly as you play different octaves on the keyboard: SAMBA WHISTLE (No. 10), TOM (No. 54), ROCK DRUM (No. 55), SWING DRUM (No. 56), TRIANGLE (No. 57), MATSURI (No. 59), INSECT (No. 82), EMERGENCY ALARM (No. 83), LASER BEAM (No. 84), COSMIC SOUND (No. 85), TELEPHONE (No. 86), and CAR HORN (No. 87).

## Playing KEYBOARD SPLIT Sounds

The KEYBOARD SPLIT preset sounds (Nos. 90–99) let you play two instrument sounds independently on opposite halves of the keyboard. The instrument listed first in the sound's name plays on the left half of the keyboard. The instrument listed last plays on the right half of the keyboard.

**KEYBOARD SPLIT Sounds**



For example, BASS/PIANO (No. 91) plays a bass sound on the left half of the keyboard and a piano sound on the right.

To play a KEYBOARD SPLIT sound, follow the steps in "Selecting/Playing a Preset Sound" on Page 10 and select any sound from Nos. 90–99.

## Playing Drum/Bass Split Sounds

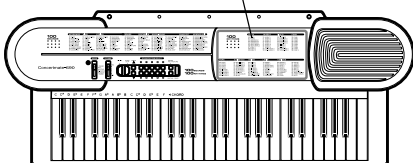
The preset sounds SLAP BASS (No. 29), ELEC BASS (No. 30), WOOD BASS (No. 31), SNARE BASS (No. 32), and SYNTH-BASS (No. 69) let you play drum sounds on the keyboard's lowest octave and bass sounds on the upper (other) three octaves.

To play a drum/bass split sound, follow the steps in "Selecting/Playing a Preset Sound" on Page 10 and select any sound from Nos. 29–32 or No. 69.

# USING THE PRESET AUTO-RHYTHMS

Your Concertmate 690 has 100 preset auto-rhythms that provide a steady beat for your music. The name and two-digit number of each preset auto-rhythm is listed on the Concertmate 690's top panel.

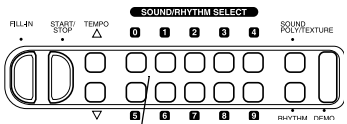
**100 RHYTHMS List**



## Selecting/Playing an Auto-Rhythm

1. Set **VOLUME** to **MIN**.
2. Set **MODE** to **NORMAL**.

   **Note:** The Fingered and Concert Chord modes are described in "Using Auto Accompaniment" on Page 13.
3. Press **RHYTHM**.
4. Select an auto-rhythm from the 100 RHYTHMS list and enter the two-digit number on the **SOUND/ RHYTHM SELECT** keypad. For example, to select EURO BEAT (No. 24), press 2, then 4.




**SOUND/RHYTHYM SELECT Keypad**

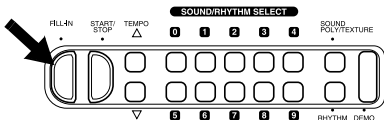
5. Press **START/STOP**. The Concertmate 690 begins playing the selected rhythm.
6. Adjust **VOLUME** to the desired level.
7. To speed up the rhythm, press **TEMPO** △. To slow it down, press **TEMPO** ▽.

   **Note:** You can adjust **TEMPO** △/▽ to play an auto-rhythm from 40 to 256 beats per minute.
8. Play the keyboard to hear the selected sound along with the rhythm.
9. To select a different rhythm, repeat Step 4. Or, if the second digit of the current rhythm is the same as the first digit of the new rhythm, simply enter the second digit of the new rhythm on the **SOUND/ RHYTHM SELECT** keypad.
10. To stop an auto-rhythm, press **START/STOP** again.

## Using FILL-IN

The Concertmate 690 lets you insert a variation into any of its 100 preset auto-rhythms.

While an auto-rhythm is playing, press **FILL-IN**. The Concertmate 690 inserts a 1- to 2-measure variation, then automatically resumes the original rhythm pattern at the end of the current measure. To insert another variation, press **FILL-IN** again.

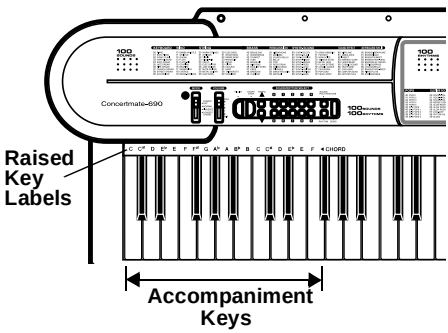



To insert a variation longer than 1–2 measures, hold down **FILL-IN**. The Concertmate 690 plays the variation until you release **FILL-IN**, then automatically resumes the original rhythm pattern at the end of the current measure.

# USING AUTO ACCOMPANIMENT

After you select an auto-rhythm, the Concertmate 690 lets you automatically add a harmonic accompaniment.

You can select from two auto accompaniment types—easy random fingering or standard fingering. Both methods are explained in detail in the following sections. But, in brief, to add an auto accompaniment pattern, first set **MODE** to **CONCERT CHORD** for easy random fingering or to **FINGERED** for standard fingering. Then use the "accompaniment keys" (the 18 keys with raised labels above them) to select the chord. Use the rest of the keys to play the melody.




## Easy Random Fingering

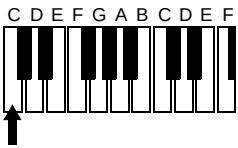
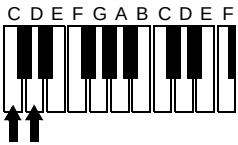
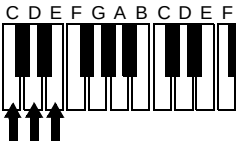
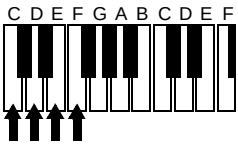
The easy random fingering method lets beginning keyboard players easily select and play a chord.

The number of accompaniment keys you press determines the type of chord played. The following chart shows the type of chord that plays when you press one, two, three, or four accompaniment keys at the same time.

| Number of Accompaniment Keys Pressed | Chord Type |
|---|---|
| 1 | Major |
| 2 | Minor |
| 3 | Dominant seventh |
| 4 | Minor seventh |

The lowest note you play determines the key of the chord. For example, if the lowest note is C, the Concertmate 690 plays a C chord.

**Note:** You can press any labeled note(s) to the right of the lowest note in the chord to produce a minor, seventh, or minor seventh chord.

| Number of Keys Pressed | Chord Type |
|---|---|
|   | Major |
|   | Minor (m) |
|   | Dominant Seventh (7) |
|   | Minor Seventh (m7) |

Follow these steps to start easy random fingering auto accompaniment.

1. Set **VOLUME** to **MIN**.
2. Set **MODE** to **CONCERT CHORD**.
3. Select and enter an auto-rhythm.
4. To start the auto-rhythm and auto accompaniment at the same time, simply press the desired accompaniment key(s).

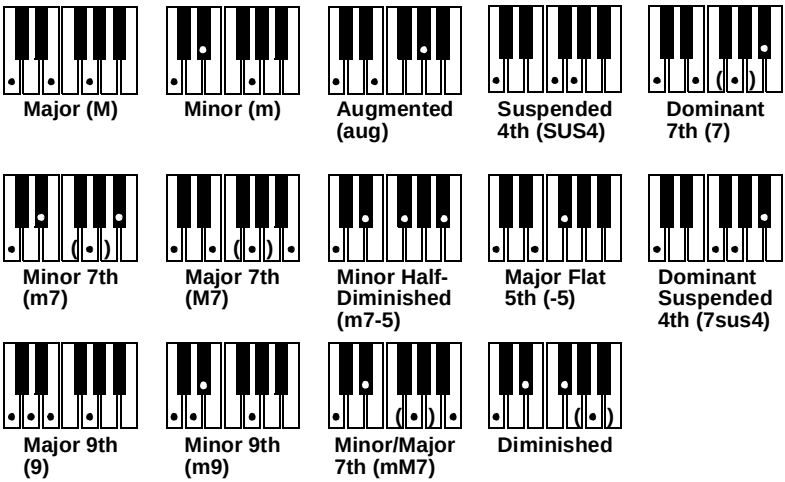
   To start the auto-rhythm before you begin the auto accompaniment, press **START/STOP**. Then, at the desired interval, begin the accompaniment by pressing the accompaniment key(s).
5. Adjust **TEMPO** △/▽ and **VOLUME** to the desired levels.
6. To change chords without interrupting the rhythm, simply press the auto accompaniment key(s) required to form the new chord.
7. To stop auto accompaniment and auto-rhythm, press **START/STOP**.

   **Note:** After you press the auto accompaniment key(s), the keyboard plays until you press other key(s) to play a different chord or until you press **START/STOP**.

## Standard Fingering

The standard fingering method uses standard formations of three or four notes, and lets the experienced musician play a wider variety of accompaniment chords.

You can play the following 14 chord types on your Concertmate 690, in any key, using the standard fingering method.




**Notes:**

- To produce a simple variation of a Cm7, Cmaj7, Cdim, or CmM7 chord, omit the finger positions shown in parentheses (on the keys).
- The diagram above shows only one possible finger position for each chord. It is possible to play a chord using several different finger positions. For example, the following three finger positions produce the same C chord.

Follow these steps to start standard fingering auto accompaniment.

1. Set **VOLUME** to **MIN**.
2. Set **MODE** to **FINGERED**.
3. Select and enter an auto-rhythm.
4. To start the auto-rhythm and auto accompaniment at the same time, simply press at least three accompaniment keys to play the desired chord.

   To start the auto-rhythm before you begin the auto accompaniment, press **START/STOP**. Then, at the desired interval, begin the accompaniment by pressing at least three accompaniment keys.

   **Note:** When **MODE** is set to **FINGERED**, the Concertmate 690 does not respond if you press fewer than three accompaniment keys.
5. Adjust **TEMPO** △/▽ and **VOLUME** to the desired levels.
6. To change chords without interrupting the rhythm, simply press the auto accompaniment keys required to form the new chord.
7. To stop auto accompaniment and auto-rhythm, press **START/STOP**.

   **Note:** After you press the auto accompaniment keys, the Concertmate 690 plays until you press other keys to play a different chord or until you press **START/STOP**.

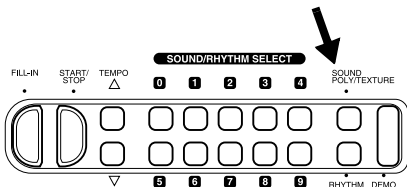
## ADJUSTING THE POLYPHONY/TEXTURE

The Concertmate 690 lets you adjust the polyphony and texture of its sound.

**Note:** "Polyphony" refers to the level of harmony and the number of notes played to produce the sound. "Texture" refers to the sound's quality or depth.

Your Concertmate 690 is automatically set to high-level polyphony/texture every time you turn it on and begin playing.

To switch to low-level polyphony/texture at any time during play, simply press **SOUND POLY/TEXTURE**. To switch back to high-level polyphony/texture, press it again.



Based on the selected feature and the polyphony/texture setting, you can play as many as eight notes at the same time, or as few as one note.

| Selected Feature | Number of Notes You Can Play | |
|---|---|---|
| | At High-Level Polyphony/ Texture | At Low-Level Polyphony / Texture |
| Preset Sound Only | 8 | 4 |
| Auto-Rhythm | 6 | 3 |
| Auto Accompaniment | 2 | 1 |

**Note:** It might be difficult to tell the difference between the high- and low-level polyphony/texture settings at low (**MIN**) volume with certain sound selections. If this occurs, adjust **VOLUME** slightly toward **MAX** and try again.

# TROUBLESHOOTING

If your Concertmate 690 is not performing as it should, these suggestions might help. If you still cannot solve the problem, take your Concertmate 690 to your local RadioShack store for assistance.

| Problem | Possible Cause | Suggestion |
|---|---|---|
| No sound from the Concertmate 690 | Power supply problem. | Check the power supply. |
| | | Are batteries installed correctly? |
| | | Are batteries fresh? |
| | | Is the adapter connected properly? |
| No accompaniment when accompaniment keys are pressed | **MODE** is set to **FINGERED** and you pressed less than three keys for a chord. | Press at least three accompaniment keys. |
| Occasional interference | Refrigerators, washing machines and similar electric appliances are causing interference. | Use an AC outlet on a different electrical circuit, away from the appliance. |

# CARE AND MAINTENANCE

Your Optimus Concertmate 690 Portable Electronic Keyboard is an example of superior design and craftsmanship. The following suggestions will help you care for the Concertmate 690 so you can enjoy it for years.

Keep the Concertmate 690 dry. If it gets wet, wipe it dry immediately. Liquids can contain minerals that corrode electronic circuits.

Use and store the Concertmate 690 only in normal temperature environments. Temperature extremes can shorten the life of electronic devices and distort or melt plastic parts.

Handle the Concertmate 690 gently and carefully. Dropping it can damage circuit boards and cases and can cause the Concertmate 690 to work improperly.

Keep the Concertmate 690 away from dust and dirt, which can cause premature wear of parts.

Wipe the Concertmate 690 with a damp cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean your Concertmate 690.

Modifying or tampering with the Concertmate 690's internal components can cause a malfunction, invalidate its warranty, and void your FCC authorization to operate it. If your Concertmate 690 is not performing as it should, take it to your local RadioShack store for assistance.

# SPECIFICATIONS

| | |
|---|---|
| Number of Keys | 49 |
| Polyphony | 8-Note (Maximum) |
| Preset Sounds | 100 |
| Auto-Rhythms | 100 |
| Built-In Speaker | 4 Inch (10 cm) Diameter (Output = 2W) |
| Demonstration Tune | 1 (Classical Medley) |
| Auto Accompaniment | Concert Chord, Fingered |
| Power Source | 3-Way AC/DC Power Sources;<br>AC: 120V, 60 Hz, With Optional AC Adapter<br>(Cat. No. 273-1656)<br>DC: 6 AA Alkaline Batteries<br>Battery Life: About 6 Hours)<br>(Cat. No. 23-552)<br>Vehicle Battery: With Optional DC Adapter<br>(Cat. No. 270-1562) |
| Power Consumption | 6.0 W |
| Dimensions (HWD) | $3^{11}/_{16} \times 34^{9}/_{16} \times 12^{7}/_{8}$ Inches<br>($9.4 \times 87.7 \times 32.7$ cm) |
| Weight (Without Batteries) | 6 lbs 11 oz<br>(3.05 kg) |
| Included Accessory | Sheet Music Stand |

Specifications are typical; individual units might vary. Specifications are subject to change and improvement without notice.

# NOTES

## Limited One-Year Warranty

This product is warranted by RadioShack against manufacturing defects in material and workmanship under normal use for one (1) year from the date of purchase from RadioShack company-owned stores and authorized RadioShack franchisees and dealers. EXCEPT AS PROVIDED HEREIN, RadioShack MAKES NO EXPRESS WARRANTIES AND ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THE WRITTEN LIMITED WARRANTIES CONTAINED HEREIN. EXCEPT AS PROVIDED HEREIN, RadioShack SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO CUSTOMER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY USE OR PERFORMANCE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGES RESULTING FROM INCONVENIENCE, LOSS OF TIME, DATA, PROPERTY, REVENUE, OR PROFIT OR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF RadioShack HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow the limitations on how long an implied warranty lasts or the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

In the event of a product defect during the warranty period, take the product and the RadioShack sales receipt as proof of purchase date to any RadioShack store. RadioShack will, at its option, unless otherwise provided by law: (a) correct the defect by product repair without charge for parts and labor; (b) replace the product with one of the same or similar design; or (c) refund the purchase price. All replaced parts and products, and products on which a refund is made, become the property of RadioShack. New or reconditioned parts and products may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

This warranty does not cover: (a) damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, lightning or other incidence of excess voltage or current; (b) any repairs other than those provided by a RadioShack Authorized Service Facility; (c) consumables such as fuses or batteries; (d) cosmetic damage; (e) transportation, shipping or insurance costs; or (f) costs of product removal, installation, set-up service adjustment or reinstallation.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

RadioShack Customer Relations, Dept. W, 100 Throckmorton St., Suite 600, Fort Worth, TX 76102

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